

APPARATUS AND PROCESS FOR FORMING
THREE-DIMENSIONAL FIBROUS PANELS

ABSTRACT OF THE DISCLOSURE

5 A fibrous panel is molded in two or more progressively formed mold members
each comprising a porous support plate to which a plurality of rigid mold pieces are
affixed. The mold pieces are truncated 3D tapered structures, and are arranged on the
support plate in a regular array so that an intersecting grid or lattice of channels is defined
between them. A fiber stock is poured into a first mold member and the stock is
10 compressed and dewatered to form a panel. The panel is removed from the first mold
member and placed into a second mold member having narrower and shallower channels
whose side walls are more upright than those of the first mold member. The panel is
further compressed and dewatered in the second mold member, and is densified in both
the vertical and lateral directions by virtue of the progressive formation of the mold
15 members.

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